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| Addition and subtraction are inverse operations (e.g., since 5+6=11, then 11-6=5) | If 🞎+⭘=✰,  then ✰-⭘=🞎  OR  If a+b=c, then c-b=a | Numbers can be added or multiplied in any order without affecting the sum  (e.g., 2 + 5= 5 + 2  OR 2 x 5 = 5 x 2) |
| Multiplication and division are inverse operations (e.g., since 3x7=21, then 21÷7=3 | If 🞎 x ⭘ = ✰,  then ✰ ÷ ⭘ = 🞎  If a x b = c,  Then c ÷ b = a | ⭘ + 🞎 = 🞎 + ⭘  a+b=b+a  OR  ⭘ x 🞎 = 🞎 x ⭘  a x b= b x a  Commutative Property |
| Adding 0 to or subtracting 0 from any number does not change the number’s value (e.g., 6+0=6; 7-0=7). | 🞎 + 0 = 🞎  🞎 - 0 = 🞎  OR  a + 0 = a  a – 0 = a | In addition, the numbers being added can be regrouped in any way without changing the sum. For example,  (13+4) +6 = 13 = (4+6). |
| Multiplying or dividing a number by 1 does not change the number’s value (e.g., 8x1=8, 7÷1=7) | 🞎 x 1 = 🞎  🞎 ÷ 1 = 🞎  OR  a x 1 = a  a ÷ 1 = a | (🞎+⭘) + ✰ = 🞎+(⭘+✰)  (r+s) + h = r + (s+h)  Associative Property |
| Any number subtracted from itself results in 0 (e.g., 9-9=0). | 🞎 - 🞎 = 0  OR  x-x = 0 | A number in a multiplication expression to be decomposed into two or more numbers. For example, 51 x 12 = 51 x 10 + 51 x 2 |
| Any number divided by itself results in 1 (8÷8=1). | 🞎 ÷ 🞎 = 1  y÷y = 1 | For a, b and c:  a x (b x c)=(a x b)+(a x c)  and  a x(b-c)=(a x b)-(a x c)  Distributive Property |
| The product of any number and 0 is 0 (e.g., 4x0=0). | 🞎 x 0 = 0  v x 0 = 0 |  |